

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 3001572 - KG Repair Coupler BR DN150 EXP
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

LCA standard: NMD Bepalingsmethode 1.1 (2022)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 08-06-2023
End of validity: 08-06-2028
Verifier: Martijn van Hövell - SGS Search



The Wavin KG sewer pipes and fittings are suitable for drain and underground sewer applications. This easy push-fit rubber ring jointing system is durable, corrosion free and light weight.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - NL - Hardenberg - Verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												D Reuse- Recovery- Recycling- potential				

Environmental impacts and parameters

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **GWP-total** = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.14	0	0.01	0.15	0	0.05	0	-0.06	0.14
ADPE	kg Sb-eq	1.09E-3	3.99E-7	1.78E-6	1.09E-3	3.58E-7	3.04E-6	4.34E-9	-1.47E-5	1.08E-3
ADPF	kg Sb-eq	1.52E-2	1.15E-4	3.06E-4	1.56E-2	1.01E-4	1.05E-3	6.01E-6	-7.37E-3	9.42E-3
GWP	kg CO2-eq	1.24E+0	1.56E-2	5.82E-2	1.31E+0	1.37E-2	5.98E-1	4.33E-3	-6.53E-1	1.27E+0
ODP	kg CFC-11-eq	6.01E-7	2.77E-9	4.60E-9	6.08E-7	2.55E-9	4.36E-8	1.44E-10	-2.88E-7	3.66E-7
POCP	kg ethene-eq	8.60E-4	9.43E-6	2.53E-5	8.95E-4	8.24E-6	8.34E-5	1.10E-6	-3.10E-4	6.78E-4
AP	kg SO2-eq	5.17E-3	6.87E-5	2.50E-4	5.49E-3	5.91E-5	6.30E-4	3.25E-6	-1.99E-3	4.19E-3
EP	kg PO4 3--eq	6.58E-4	1.35E-5	3.21E-5	7.03E-4	1.18E-5	1.00E-4	1.68E-6	-2.75E-4	5.42E-4
HTP	kg 1,4-DB-eq	4.99E-1	6.58E-3	2.70E-2	5.33E-1	5.88E-3	1.59E-1	3.39E-4	-1.89E-1	5.08E-1
FAETP	kg 1,4-DB-eq	1.44E-2	1.92E-4	9.23E-4	1.55E-2	1.72E-4	2.44E-3	1.04E-4	-5.39E-3	1.29E-2
MAETP	kg 1,4-DB-eq	3.64E+1	6.91E-1	3.64E+0	4.07E+1	6.15E-1	8.39E+0	1.26E-1	-1.22E+1	3.77E+1
TETP	kg 1,4-DB-eq	3.24E-3	2.33E-5	2.01E-3	5.27E-3	2.08E-5	5.74E-4	1.15E-6	-1.79E-3	4.08E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.27E+0	1.58E-2	6.66E-2	1.35E+0	1.39E-2	6.25E-1	5.06E-3	-6.12E-1	1.39E+0
GWP-f	kg CO2 eq	1.26E+0	1.58E-2	5.11E-2	1.33E+0	1.38E-2	6.00E-1	5.05E-3	-6.66E-1	1.28E+0
GWP-b	kg CO2 eq	5.54E-3	7.28E-6	1.06E-2	1.61E-2	8.41E-6	2.50E-2	6.12E-6	5.43E-2	9.54E-2
GWP-luluc	kg CO2 eq	1.38E-3	5.78E-6	4.85E-3	6.24E-3	4.90E-6	1.62E-4	1.26E-7	-7.61E-4	5.65E-3
ODP	kg CFC11 eq	6.04E-7	3.48E-9	5.40E-9	6.13E-7	3.19E-9	4.50E-8	1.78E-10	-2.87E-7	3.75E-7
AP	mol H+ eq	6.28E-3	9.14E-5	3.12E-4	6.68E-3	7.89E-5	7.94E-4	4.35E-6	-2.42E-3	5.14E-3
EP-fw	kg P eq	5.76E-5	1.59E-7	8.96E-7	5.86E-5	1.14E-7	5.43E-6	5.70E-9	-2.53E-5	3.89E-5
EP-m	kg N eq	1.10E-3	3.22E-5	7.37E-5	1.20E-3	2.82E-5	1.99E-4	3.60E-6	-4.42E-4	9.94E-4
EP-T	mol N eq	1.20E-2	3.55E-4	8.12E-4	1.32E-2	3.11E-4	2.20E-3	1.73E-5	-4.78E-3	1.09E-2
POCP	kg NMVOC eq	4.16E-3	1.01E-4	2.31E-4	4.49E-3	8.89E-5	6.50E-4	6.02E-6	-1.59E-3	3.64E-3
ADP-mm	kg Sb eq	1.09E-3	3.99E-7	1.78E-6	1.09E-3	3.58E-7	3.04E-6	4.34E-9	-1.47E-5	1.08E-3
ADP-f	MJ	3.21E+1	2.38E-1	5.72E-1	3.29E+1	2.13E-1	2.08E+0	1.30E-2	-1.53E+1	1.99E+1
WDP	m3 depriv.	1.81E+0	8.51E-4	4.42E-1	2.25E+0	6.52E-4	8.35E-2	8.07E-5	-8.69E-1	1.47E+0
PM	disease inc.	5.07E-8	1.42E-9	3.85E-9	5.60E-8	1.25E-9	9.58E-9	8.95E-11	-1.91E-8	4.79E-8
IR	kBq U-235 eq	7.95E-2	9.96E-4	9.09E-4	8.14E-2	9.29E-4	7.34E-3	6.03E-5	-2.99E-2	5.99E-2
ETP-fw	CTUe	3.72E+1	2.12E-1	1.33E+0	3.87E+1	1.73E-1	1.62E+1	1.79E-1	-1.21E+1	4.32E+1
HTP-c	CTUh	9.68E-10	6.88E-12	4.60E-11	1.02E-9	6.14E-12	2.30E-10	3.58E-13	-3.29E-10	9.29E-10
HTP-nc	CTUh	3.07E-8	2.32E-10	1.44E-9	3.24E-8	2.06E-10	5.66E-9	3.52E-11	-1.12E-8	2.71E-8
SQP	Pt	7.08E+0	2.06E-1	4.27E-2	7.33E+0	1.82E-1	1.26E+0	3.33E-2	-1.19E+1	-3.05E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.01E+0	2.98E-3	2.78E+0	4.79E+0	3.05E-3	1.49E-1	5.05E-4	-2.46E+0	2.48E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.01E+0	2.98E-3	2.78E+0	4.79E+0	3.05E-3	1.49E-1	5.05E-4	-2.46E+0	2.48E+0
PENRE	MJ	3.44E+1	2.52E-1	6.18E-1	3.53E+1	2.26E-1	2.21E+0	1.38E-2	-1.65E+1	2.12E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.44E+1	2.52E-1	6.18E-1	3.53E+1	2.26E-1	2.21E+0	1.38E-2	-1.65E+1	2.12E+1
PET	MJ	3.64E+1	2.55E-1	3.40E+0	4.01E+1	2.29E-1	2.36E+0	1.43E-2	-1.90E+1	2.37E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	2.27E-2	2.90E-5	1.05E-2	3.32E-2	2.41E-5	2.53E-3	1.60E-5	-1.05E-2	2.53E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.47E-4	6.03E-7	6.07E-7	1.48E-4	5.44E-7	3.56E-6	1.58E-8	-1.35E-5	1.39E-4
NHWD	kg	1.31E-1	1.51E-2	9.37E-4	1.47E-1	1.32E-2	7.98E-2	5.72E-2	-4.71E-2	2.50E-1
RWD	kg	7.97E-5	1.56E-6	1.13E-6	8.23E-5	1.45E-6	7.90E-6	8.49E-8	-2.71E-5	6.46E-5
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0